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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,856	12/22/2000	Richard P. Modelski	P 270183 NOR-13175BA	8575
34845	7590	04/29/2005	EXAMINER	
STEUBING AND MCGUINNESS & MANARAS LLP			MOORE JR, MICHAEL J	
125 NAGOG PARK			ART UNIT	
ACTON, MA 01720			PAPER NUMBER	

2666

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/741,856	<b>Applicant(s)</b> MODELSKI ET AL.	
	<b>Examiner</b> Michael J. Moore, Jr.	<b>Art Unit</b> 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1-39** are rejected under 35 U.S.C. 102(e) as being anticipated by Calvignac et al. (U.S. 6,298,340). The Calvignac et al. reference teaches all of the limitations of the listed claims with the reasoning that follows.

Regarding claim 1, “a method for performing a plurality of filter operations on a data packet using an instruction” is anticipated by the frame classification flowchart shown in Figure 4. “Receiving an instruction to filter at least one data packet” is anticipated by packet key 48 of Figure 4, which is received by software management tree 46 for filtering purposes as described in column 5, lines 49-67. “Retrieving a filter result based on the received instruction” is anticipated by the full-scale comparison between a rule in the rule set and the key by software management tree 46 as described in column 5, lines 61-65. Lastly, “performing a plurality of filter operations on the at least one data packet in accordance with the retrieved filter result” is anticipated by the plurality of actions 1-N shown in Figure 4 that are carried out based on the result of the comparison between a rule in the rule set and a key.

Regarding claims **2, 15, and 28**, processing the at least one data packet based on a determination of the performed filter operations is anticipated by the high speed processing section shown in Figure 4.

Regarding claims **3, 16, and 29**, “wherein the instruction comprises a set of data bits” is anticipated by the key shown in Figure 5A, which is composed of a plurality of fields that are each composed of a set of data bits.

Regarding claims **4, 17, and 30**, “wherein the set of data bits of the instruction comprises 32 data bits” is anticipated by source address field (SA) of the key shown in Figure 5A, which is composed of 32 data bits as stated in column 6, line 66.

Regarding claims **5, 18, and 31**, “wherein the filter operations comprise 32 filter operations” is anticipated by the plurality of actions shown in the rule database of Figure 6 that correspond to a plurality of filter rules 0-(N-1).

Regarding claims **6, 19, and 32**, “wherein the set of data bits of the instruction comprises 64 data bits” is anticipated by the source address field (SA) and the destination address field (DA) of the key shown in Figure 5A, which in combination are composed of 64 bits as described in column 6, line 66 – column 7, line 3.

Regarding claims **7, 20, and 33**, “wherein the filter operations comprise 64 filter operations” is anticipated by the plurality of actions shown in the rule database of Figure 6 that correspond to a plurality of filter rules 0-(N-1).

Regarding claims **8, 21, and 34**, “wherein the processing of the data packet comprises classifying the data packet” is anticipated by the frame classification flowchart of Figure 4 described in column 5, lines 37-65.

Regarding claims **9, 22, and 35**, “wherein the data packet comprises one of SONET, ATM, Ethernet, HDLC, PPP, IP, TCP, and UDP data packet” is anticipated by the IP header rule specification spoken of in column 7, lines 28-33.

Regarding claims **10, 23, and 36**, “wherein the at least one data packet comprises a plurality of data fields” is anticipated by the IP frame format shown in Figure 5A, which is composed of a plurality of data fields.

Regarding claims **11, 24, and 37**, wherein the performing of the filter operations on the at least one data packet comprises performing the filter operations on at least one of the data fields of the at least one data packet is anticipated by the plurality of actions shown in Figure 6 that are performed on the packet associated with the packet key shown in Figure 5A.

Regarding claims **12, 25, and 38**, “wherein the filter operations correspond to the data bits of the instruction” is anticipated by the plurality of actions shown in Figure 6 that correspond to a plurality of filter rules 0-(N-1) that are compared to the packet key shown in Figure 5A.

Regarding claims **13, 26, and 39**, “wherein the retrieving the filter result based on the received instruction comprises a radix search” is anticipated by the radix tree-type decision process spoken of in column 1, lines 51-61.

Regarding claim **14**, “an apparatus for performing a plurality of filter operations on a data packet using an instruction” is anticipated by switch/router 10 of Figure 3 and control point 12 of Figure 2. “A memory configured to store a filter result, the filter result being retrieved from the memory based on an instruction” is anticipated by the memory

Art Unit: 2666

embedded in network ports of router/switch 10 of Figure 3 as stated in column 5, lines 27-29. "The instruction being configured to filter at least one data packet" is anticipated by packet key 48 of Figure 4, which is received by software management tree 46 for filtering purposes as described in column 5, lines 49-67. Lastly, "a processor coupled to the memory, the processor being configured to perform a plurality of filter operations on the at least one data packet in accordance with the filter result" is anticipated by the pico-processor embedded in network ports of router/switch 10 of Figure 3 as stated in column 5, lines 27-29.

Regarding claim 27, "A computer readable medium encoded with a program for a computer" is anticipated by switch/router 10 of Figure 3 and control point 12 of Figure 2, which use an application program for packet classification and filtering as described in column 4, lines 61-64. "Receiving an instruction to filter at least one data packet" is anticipated by packet key 48 of Figure 4, which is received by software management tree 46 for filtering purposes as described in column 5, lines 49-67. "Retrieving a filter result based on the received instruction" is anticipated by the full-scale comparison between a rule in the rule set and the key by software management tree 46 as described in column 5, lines 61-65. Lastly, "performing a plurality of filter operations on the at least one data packet in accordance with the retrieved filter result" is anticipated by the plurality of actions 1-N shown in Figure 4 that are carried out based on the result of the comparison between a rule in the rule set and a key.

***Response to Arguments***

Art Unit: 2666

3. Applicant's arguments filed 9/16/2004 have been fully considered but they are not persuasive.

Regarding claim 1, Applicant argues that the plurality of actions 1-N shown in Figure 4 of Calvignac et al. do not anticipate *"performing a plurality of filter operations on the at least one data packet in accordance with the retrieved filter result"* and that only one of the actions 1-N is performed for a given rule set result. This statement is noted. However, based upon the claim language it is held that this limitation is anticipated by the Calvignac et al. reference.

Figure 4 shows how a rule set 38 is input by a user 40. The Choice bit algorithm 42 then operates on the rule set 38 to find choice bits 44 that are transmitted to the software managed tree 46. The software managed tree then does a full scale compare between a rule in the rule set and the packet key 48 to determine if the packet matches the rule in the rule set. Then the process proceeds to perform an action of a plurality of actions 1-N based upon the retrieved filter result.

The limitation *"performing a plurality of filter operations on the at least one data packet in accordance with the retrieved filter result"* can be broadly interpreted to mean performing different actions (filter operations) on the data packet based upon the result (retrieved filter result) of the rule comparison as taught in the Calvignac et al. reference. Therefore it is held that Calvignac et al. anticipates this limitation. Similar reasoning applies to the limitations of claims **14 and 27**.

### **Conclusion**

Art Unit: 2666

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2666

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.  
Examiner  
Art Unit 2666

mjm MM

A handwritten signature in black ink, appearing to read 'Frank Duong', with a stylized flourish at the end.

**FRANK DUONG**  
**PRIMARY EXAMINER**